



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

EMERGENCY RESPONSE BRANCH 1

9311 GROH ROAD

GROSSE ILE, MI 48138

18 JUN 2010

EPA Region 5 Records Ctr.



366012

**MEMORANDUM**

**SUBJECT:** AMENDMENT TO ACTION MEMORANDUM: Documentation of Use of the Interim Measures Waiver at the Little Traverse Bay CKD Release Site, Petoskey, Resort Township, Emmet County, Michigan (Site ID #B5AM)

**FROM:** Ralph Dollhopf, On-Scene Coordinator  
Emergency Response Branch 1 – Section 1

**THRU:** Jason H. El-Zein, Chief *2 H. El-Zein*  
Emergency Response Branch 1 *for*

**TO:** Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this Amendment to the Action Memorandum is to document the use of the interim measures waiver at the Little Traverse Bay CKD Site (the Site) in Petoskey, Resort Township, Emmet County, Michigan. Section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 USC § 9621(d)(4), provides that an otherwise applicable or relevant and appropriate requirement (ARAR) may be waived during on-site CERCLA remedial actions under certain circumstances. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) at 40 C.F.R. § 300.415(j) requires removal actions to attain ARARs to the extent practicable considering the exigencies of the situation. Section 300.415(j) also allows the waivers provided in Section 121(d)(4) of CERCLA and 40 C.F.R. § 300.430(f)(1)(ii)(C) to be used for removal actions. Section 300.430(f)(1)(ii)(C)(1) allows EPA to select an interim measure that does not meet an ARAR under federal environmental or state environmental or facility siting laws if the interim measure will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or state requirement.

**II. PROPOSED ACTIONS**

Pursuant to an Administrative Order on Consent for Removal Action issued on February 22, 2005, Docket No. VW-05-C-810, Respondents CMS Land Company and CMS Capital, LLC (CMS) have designed, constructed and are operating interim recovery systems to prevent release of high pH leachate from the Site to lakeshore areas and Lake Michigan (the Lake). To prevent

the release of high-pH leachate, CMS has, among other things, installed an interim recovery system at the West CKD Area and performed several augmentations to this system. Nonetheless, monitoring results show that elevated pH (pH > 9.0 standard units) is still present in the West CKD Area and Lake Michigan.

To eliminate the remaining releases of high pH leachate, CMS has proposed a project which includes a low permeability vertical barrier system, improvements to the West CKD interim leachate recovery system and an interflow control system. If this project is approved by EPA, CMS will conduct this work from approximately July 1, 2010, to September 30, 2010. Construction of these improvements will require work below the water table and dewatering will be necessary so that the work can be conducted in a dry environment.

Dewatering fluids will include leachate, groundwater and Lake water with the primary flows consisting of Lake water and groundwater. CMS estimates the dewatering rates from approximately 50 to 350 gallons per minute (gpm). The average rate is estimated to be approximately 150 gpm.

CMS has explored both on-site and off-site discharge options to manage the dewatering fluids. Potential on-site options include discharge to a lift station and transfer to the existing treatment plant through an existing force main or direct discharge to Lake Michigan following treatment. Potential off-site options include tanker loading and trucking. CMS asserts that discharge to a lift station and transfer to the existing treatment plant is not feasible because the treatment system cannot handle a dewatering project of this magnitude.<sup>1</sup> In addition, CMS asserts that direct tanker loading is not feasible. Damage to residential and golf course property would likely occur since the current roadways are not wide enough to accommodate the tankers. To accommodate the tankers, a roadway would need to be widened and a turnaround and tanker loading area constructed. At 150 gpm, a tanker with a capacity of 11,500 gallons would be loaded every 75 minutes and tankers would continuously move in and out of the construction area. CMS anticipates strong resistance from local homeowners and the Bay Harbor golf course to such a high volume of tanker traffic.

CMS has proposed a temporary discharge to Lake Michigan. CMS would install a treatment program to remove suspended solids prior to discharge to the Lake. The treatment program would also lower discharge of metals that may be present in the dewatering fluids. In addition, pH would be adjusted as necessary to meet water quality standards.

#### Applicable or Relevant and Appropriate Requirements

EPA has consulted with the Michigan Department of Natural Resources and Environment (DNRE) regarding ARARs for this project. DNRE has recommended limits for pH, mercury and whole effluent toxicity. In addition, DNRE recommends monitoring of pH, mercury, barium,

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<sup>1</sup> The existing on-site treatment system currently manages over 150,000 gallons per day (gpd) of high pH leachate collected from interim recovery systems installed at four other lakeshore areas at the Site. For comparison purposes the proposed project is expected to generate up to an additional 300,000 gpd of dewatering fluids, substantially exceeding current infrastructure capacity.

copper, selenium, vanadium, zinc, total dissolved solids, potassium, and whole effluent toxicity. Based on the monitoring data provided by CMS in its April 15, 2010, preliminary design report, DNRE has concluded that the proposed plan will ensure that water quality standards will be met for all parameters except mercury.

Michigan water quality standards establish a water quality value for mercury for protection of wildlife of 0.0013 micrograms per liter (ug/L) or 1.3 nanograms per liter (ng/L). *See* Rule R 323.1057 (Table 4). Analytical results of water samples collected in Lake Michigan in the vicinity of the Site during 2006 and 2007 show background concentrations of mercury ranging from 1 to 8 ng/L. The concentrations of mercury in the leachate and groundwater that currently vent to Lake Michigan at West CKD range from 5-36 ng/L and from 0.25 - 407 ng/L, respectively. The concentrations of mercury in the dewatering fluids collected during the project are expected to range from 3 -113 ng/L. Treatment of that influent dewatering fluids stream is expected to further reduce mercury concentrations.

If the project were not performed, the discharge of high pH leachate would continue unabated resulting in continuation of direct contact threats to humans as well as threats to aquatic organisms. Moreover, mercury contained in high pH leachate currently venting to the Lake would continue unabated and continue to exceed the state water quality standard for protection of wildlife. If implemented, the project is expected to immediately and permanently eliminate high pH leachate discharge to the Lake from the time the project is initiated. The project is expected to also reduce the concentration of mercury currently venting to the Lake from groundwater in the West CKD area to levels near the water quality standard of 1.3 ng/L upon its completion. Successful completion of similar interim response leachate recovery systems at other areas of the Site have resulted in high percentages of metals reduction from leachate discharge (over 90 % in some cases). Thus, implementation of the project will result in the protection of human health and the environment.

Due to the health risks associated with discharge of high pH leachate from the Site, the Northwest Michigan Community Health Agency issued several public health advisories in 2004 and 2005 instructing people to avoid certain areas of the shoreline along Little Traverse Bay. These advisories include the West CKD area. It is anticipated that the local health agency will lift the public health advisory it has applied to the West CKD area once the high pH leachate is eliminated following the completion of the project.

The interim measures waiver at 40 C.F.R. § 300.430(f)(1)(ii)(C)(1) allows EPA to select an interim measure that does not meet an ARAR under federal environmental or state environmental or facility siting laws if the interim measure will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or state requirement. In the preamble to the final rule promulgating the NCP, EPA explained the circumstances under which this waiver may be used as follows:

This waiver is intended for interim measures which by their temporary nature do not attain all ARARs. The criteria proposed [in the preamble to the proposed rule] were that an interim measure for which this waiver is invoked should be followed within a reasonable time by complete measures that attain ARARs, and that the interim measure

should not exacerbate site problems nor interfere with the final remedy (53 FR 51438-39). [EPA promulgated the final rule as proposed.]

55 Fed. Reg. 8747 (March 8, 1990).

The project described above meets the conditions for an interim measures waiver. First, the discharge of the dewatering fluids is temporary in nature and should last only 90 days. Second, this project is expected to be followed within one to two years by implementation of a long-term remedy to be negotiated between the State of Michigan and CMS. Third, the discharge of the dewatering fluids is not expected to exacerbate Site problems or interfere with the final remedy. As described above, the pH of leachate contained in dewatering fluids to be discharged to the Lake will actually immediately be controlled unlike that which is currently venting and will continue to vent to the Lake if the project is not performed. Furthermore, upon completion of the project, the concentration of mercury venting to the Lake will be permanently reduced. Finally, this project is not expected to interfere with the final remedy and will likely be incorporated as part of the final remedy implemented at this Site. EPA expects the final remedy to fully comply with all ARARs including the ARAR for mercury.

### **III. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Delayed or no action will result in increased potential of the toxic and hazardous substances to release, thereby threatening the environment and the health and welfare of nearby residents and other persons who are in close proximity to the Site.

### **IV. RECOMMENDATION**

This decision document describes the need for the use of an interim measures waiver for the Little Traverse Bay CKD Release Site located in Resort Township, Emmet County, Michigan. This document has been developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site, an index of which is attached to this Action Memorandum.

The circumstances described above meet the requirements for an interim measures waiver at 40 C.F.R. §§ 300.415(j) and 300.430(f)(1)(ii)(C)(1). I recommend your approval of the proposed waiver. You may indicate your decision by signing below.

APPROVE: Richard C. Karl  
Richard C. Karl  
Director, Superfund Division

DATE: 6-18-10

DISAPPROVE: \_\_\_\_\_  
Richard C. Karl  
Director, Superfund Division

DATE: \_\_\_\_\_

Attachment:

1. Administrative Record Index

cc: David Chung, U.S. EPA, 5104A  
Michael Chezik, U.S. DOI  
Robert Wagner, MDEQ  
Brenda Sayles, MDEQ

bcc: M. Colvin, MRS-10J  
J. Glover, SR-6J  
M. Durno, ME-W  
J. El-Zein, SE-5J  
R. Dollhopf, SE-GI  
M. Johnson, ATSD- 4J  
W. Messenger, SE-5J  
A. Rowan, P-19J  
ERB Reading File, (C. Beck), SE-5J  
ERB Delivery Order File, (C. Norman/G. Stanuch), SE-5J  
ERB Site File (M. Bedford), SMR-7J  
C. Heise, MCC-10J  
C. Liszewski, C-14J  
T. Hyde, W-15J  
J.Colletti, WN-16J

# ATTACHMENT 1

## U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

### ADMINISTRATIVE RECORD FOR LITTLE TRAVERSE BAY CKD RELEASE SITE PETOSKEY, RESORT TOWNSHIP, EMMET COUNTY, MICHIGAN

UPDATE #3  
JUNE 14, 2010

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	08/01/91	U.S. EPA/ OERR	U.S. EPA	Superfund Removal Pro- cedures: Guidance on the Consideration of ARARs During Removal Actions	37
2	03/01/10	CMS Land	U.S. EPA	West CKD Area Leachate Release Mitigation Con- ceptual Design Report Downgradient Vertical Barrier System and WILRS Improvement	67
3	04/15/10	Kelterborn, G., CMS Land	Dollhopf, R., U.S. EPA	Letter re: Preliminary Design Report for the WCKD Leachate Release Mitigation Project	168
4	04/30/10	Prentice, H., CMS Energy	Dollhopf, R., U.S. EPA	Design Document: Construc- tion Water Management Pro- gram--Pretreatment Train and Monitoring Plan Leachate Release Mitigation for the West CKD Area w/ Attached E-Mail Transmission	5
5	05/07/10	Prentice, H., CMS Energy	Dollhopf, R., U.S.EPA	Design Document: Construc- tion Water Management Pro- gram--Flow Separation Eval- uation Leachate Release Mitigation for the West CKD Area w/ Attached E-Mail Transmission	3
6	05/28/10	Holden, S., MDNRE	Dollhopf, R., U.S. EPA	E-Mail Transmission re: DNRE Review of Draft OSC Response to DNRE Recommen- dations for the Proposed West CKD Dewatering Dis- charge to Lake Michigan	2
7	05/28/10	Kelterborn, G., CMS Land	Dollhopf, R., U.S. EPA	Letter re: Final Design Package for the WCKD Leachate Release Mitigation Project	13

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8	06/07/10	Johnson, R., Global Remediation Technologies, Inc.	Dollhopf, R., U.S. EPA	E-Mail Transmission re: WCKD Augmentation Area Groundwater Mercury Concentrations w/ Reply History	2
9	06/10/10	Kelterborn, G., CMS Land	Dollhopf, R., U.S. EPA	Letter re: Potential Mercury Concentrations of Construction Dewatering Management for the WCKD Leachate Release Mitigation Project	1
10	06/10/10	Prentice, H., CMS Energy	Dollhopf, R., U.S. EPA	E-Mail Transmission re: Calculations for the Mercury Concentration Range w/ Reply History	3
11	00/00/00	Dollhopf, R., U.S. EPA	Karl, R., U.S. EPA	Amendment to Action Memo- randum: Documentation of Use of the Interim Measures Waiver at the Little Tra- verse Bay CKD Release Site (PENDING)	



**REMOVAL PROGRAM**  
**AMENDMENT TO ACTION MEMORANDUM**  
**ELECTRONIC ROUTING AND CONCURRENCE SLIP**

**Little Traverse Bay CKD Release Site**

- 1) ON-SCENE COORDINATOR (Ralph Dollhopf)

Signature Ralph Dollhopf Date: 6/11/10

- 2) ADMINISTRATIVE RECORDS COORDINATOR (Jan Pfundheller)

Signature Jan Pfundheller Date: 6/11/10

(1 – day turnaround)

- 3) OFFICE OF REGIONAL COUNSEL:

STAFF ATTORNEY (Christine Liszewski)

Signature Christine Liszewski Date: 6/14/10

ORC SUPERVISOR (Debra Klassman)

Signature Christine Liszewski for Debra Klassman Date: 6/14/10

(3-day turnaround)

- 4) SECTION CHIEF, OPRS (Mark Durno)

Signature Mark Durno Date: 6/16/10

(3-day turnaround)

- 5) BRANCH CHIEF, ERB 1 (Jason El-Zein)

Signature Thomas Geishecker for Jason El-Zein Date: 6/17/10

(3-day turnaround)

*258 6/18*

- 6) SECTION SECRETARY PRINT/ LOG-OUT (Tracy Johnson)

Signature tj Date: 6/17/10

(1-day turnaround)

- 7) DIRECTOR, SUPERFUND DIVISION (Richard C. Karl) (MC S-6J)

Signature R. Karl Date: 6-18-10

- 8) BRANCH SECRETARY (Cynthia Beck)

Signature C. Beck Date: 6-21-10

(1-day turnaround)

- 9) RECORDS CENTER SDMS CONTRACTOR (MC SMR-7J)

Signature \_\_\_\_\_ Date: \_\_\_\_\_

(3 – day turnaround)

v 11/20/08